

Appl. No. : 10/017,341
Filed : December 13, 2001

AMENDMENTS TO THE CLAIMS

1-9. (Cancelled)

10. (Currently amended) A stent delivery system, comprising:

an elongated catheter having a proximal and distal end portion and an expandable member disposed along the distal end portion of the elongated catheter, said expandable member being coupled to an expansion actuator;

a stent which is adjustable between a first collapsed diameter and at least a second expanded diameter, comprising a tubular member having a length and a diameter, and comprising a series of sliding and locking radial elements, and at least one articulating mechanism which permits one-way sliding of the radial elements from the first collapsed diameter to the second expanded diameter but inhibits radial recoil from the second expanded diameter, wherein no radial element overlaps with itself in the second expanded diameter, wherein said stent is disposed in its collapsed state over the expandable member on the elongated catheter; and

a degradable polymeric coating selected from a group consisting of polyvinyl pyrrolidone, polyethylene glycol, polyethylene oxide, polyethylene acetate, polyvinyl alcohol, polyacrylic acid, polymethacrylic acid, polyacrylamide, hydrophilic soft segment urethane, gum Arabic, gum tragacanth, or any combination thereof, wherein said polymeric coating holds said stent on said expandable member.

11. (Previously presented) The stent delivery system of claim 10, where said coating further comprises a compound selected from the group consisting of antithrombotics, anticoagulants, antimitogens, antimitotoxins, antisense oligonucleotides, gene therapy vehicles, nitric oxide, growth factors and inhibitors, hirudin, hirugen, hirulog, D-Pro-Phe-Arg chloromethyl ketone (PPACK), D-phenylalanyl-L-prolyl-L-arginyl chloromethyl ketone (FPRCH₂Cl), heparin, C6-ceramide and warfarin.

12. (Previously presented) The stent delivery system of claim 10, wherein each radial element comprises at least one elongated rib disposed between first and second end portions.

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13. **(Previously presented)** The stent delivery system of claim 12, wherein the radial elements alternate between radial elements having an odd number of elongated ribs and radial elements having an even number of elongated ribs.

14. **(Previously presented)** The stent delivery system of claim 13, wherein the radial elements alternate between radial elements having one elongated rib and radial elements having two elongated ribs.

15. **(New)** A stent delivery system, comprising:

an elongated catheter having a proximal and distal end portion and an expandable member disposed along the distal end portion of the elongated catheter, said expandable member being coupled to an expansion actuator;

a stent which is adjustable between a first collapsed diameter and at least a second expanded diameter, comprising a tubular member having a length and a diameter, a diameter, and a circumference, and comprising a series of sliding and locking radial elements, wherein each radial element is structurally discrete from the other radial elements in the series and forms only a fraction of the circumference of the tubular member, and at least one articulating mechanism which permits one-way sliding of the radial elements from the first collapsed diameter to the second expanded diameter but inhibits radial recoil from the second expanded diameter, wherein said stent is disposed in its collapsed state over the expandable member on the elongated catheter; and

a degradable polymeric coating selected from a group consisting of polyvinyl pyrrolidone, polyethylene glycol, polyethylene oxide, polyethylene acetate, polyvinyl alcohol, polyacrylic acid, polymethacrylic acid, polyacrylamide, hydrophilic soft segment urethane, gum Arabic, gum tragacanth, or any combination thereof, wherein said polymeric coating holds said stent on said expandable member.

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16. **(New)** The stent delivery system of claim 15, where said coating further comprises a compound selected from the group consisting of antithrombotics, anticoagulants, antimitogens, antimitotoxins, antisense oligonucleotides, gene therapy vehicles, nitric oxide, growth factors and inhibitors, hirudin, hirugen, hirulog, D-Pro-Phe-Arg chloromethyl ketone (PPACK), D-phenylalanyl-L-prolyl-L-arginyl chloromethyl ketone (FPRCH₂Cl), heparin, C6-ceramide and warfarin.

17. **(New)** The stent delivery system of claim 15, wherein each radial element comprises at least one elongated rib disposed between first and second end portions.

18. **(New)** The stent delivery system of claim 15, wherein the radial elements alternate between radial elements having an odd number of elongated ribs and radial elements having an even number of elongated ribs.

19. **(New)** The stent delivery system of claim 15, wherein the radial elements alternate between radial elements having one elongated rib and radial elements having two elongated ribs.